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ABSTRACT

A sample of 48 middle and lower class kindergarten and second grade students participated in a study to determine what speech adjustments school-age children made for listeners of different ages. Half the second grade subjects learned about two performance tasks--a board game and constructing columns of colored blocks--from the researcher, after which they taught the game and directed the construction task to the other second grade students and to kindergarten students during separate situations. The speaker/leaders were recorded and analyzed for differences across listener types, including mean length of utterances, developmental sentence scores, and type token ratios for lexical diversity variations of adjectives, nouns, pronouns, and prepositions. The statistical analyses of the data indicated that neither the total number of utterances nor mean length of utterances of the second grade speakers varied as the listener changed from peer to kindergartener. Significant differences were found between middle and lower class speakers for use of syntax: lower class second grade speakers used a greater variety of syntax when speaking to kindergarten students than to peers, and they used a greater number of adjectives in their speech to peers than to kindergarten students. (These results are discussed for their implications to classroom organizational patterns.) (RL)

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AN ANALYSIS OF THE SPEECH ADJUSTMENT OF
SECOND GRADE CHILDREN TO VARIATIONS
IN THE AGE OF LISTENERS

A Paper Presented at the Annual Meeting of the
National Conference on Language Arts
in the Elementary School

Hartford, Connecticut

March 23-25, 1979

by

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Introduction

It has been known for some time that speakers make a number of adaptations in their speech depending upon the needs of the attending listener. Objective observers have noted that such speech modifications occur whether the speaker is found in a formal or informal setting. In fact, so common is the ability to adapt to varying listener characteristics, that it is more often than not simply taken for granted as a naturally occurring phenomena. Without this capability, the degree to which successful communication is achieved would be severely limited. Since most verbal encounters are successful, the speech style selected by a speaker for a given occasion is usually an appropriate one. Successful communication, then, rests primarily on the speaker's ability to respond adequately to that unique set of requirements established for his speech style by the listener.

A question that is frequently raised in reference to the speaker's ability to make listener appropriate speech adjustments is whether or not children alter their speech in much the same fashion as do adults. This linguistic capability may well be acquired and refined as one's language experiences broaden. If this ability is, as most suspect, a learned language technique, evidence should

exist to demonstrate that children improve upon their ability to make listener appropriate speech adjustments as they mature. Research conducted by Shatz and Gelman (1973) has suggested that children as young as four years of age show indications of speech alterations according to the listener characteristic of age. Similar speech adjustments, therefore, should be even more readily identifiable with children of primary school age.

During recent years, techniques have been developed to permit systematic investigations into speech behaviors. Spectrogram analyses, measures of syntactic maturity (Lee, 1971) and the determination of mean length of utterance based on morpheme count rather than words (Brown, 1974) are a few of the now available procedures that can be readily employed to analyze speech samples. The construction of such language assessment instruments has facilitated the investigation into the question of speech adjustment according to particular listener characteristics.

Speech patterns can now be compared and contrasted on a number of measures. Specific instances in which speakers adjust their speech in response to a particular listener characteristic can be isolated. By determining whether or not school age children exercise an ability to adapt their speech to a specific listener characteristics, information regarding the development of this capacity will contribute to the growing store of knowledge concerning language acquisition and development. Since the need to assist the child in developing adequate language performance has by no means abated, application of this information can be made to language

education programs. The purpose of this investigation was to determine if indeed school-age children make listener appropriate speech adjustments.

Statement of the Problem

Previous investigations have demonstrated that speakers are affected by various listener characteristics. Those listener characteristics focused upon in recent research studies are: variations in listener age (Shatz and Gelman, 1973), listener emotional characteristics (Alvy, 1973), differing social class status (Krauss, 1968), types of listener responses (Weeks, 1971), complexity of concept being discussed (Krauss, 1969), and role playing tendencies (Dale and Kelly, 1972; Sachs and Devin, 1973).

While each of these studies has contributed information related to the speaker's ability to make listener adapted changes, the wide range of focuses taken in these investigations, the variety of research techniques employed and the variability in the ages of participants has resulted in a scatter of information rather than a concise statement of conclusion regarding the speaker's ability to make listener appropriate speech adjustments. In almost each situation, the necessity of replication for supportive evidence has been cited.

This study attempted to determine what, if any, speech adjustments according to listener ages occur among school-age children. The basic question investigated in this study was: Do second grade children speak differently to kindergarteners than they do to peers?

Since previous research has indicated that sex and social class may be factors influencing speech adjustments, this study elected to incorporate both of these variables into the investigation. Randomly selected children from an urban and a suburban school participated in this study. The hypotheses were stated in null form for statistical analysis. The .05 level of confidence was selected for testing the null hypotheses.

The major null hypotheses was that:

H₀ #1 The speech of second graders to peers will not differ from their speech to five year olds.

The subordinate null hypotheses were:

H₀ #2 The number of significant variations in the speech of middle-class second-grade speakers occurring as the age of the listener changes will not differ from the number of significant variations in the speech of lower-class second-grade speakers.

H₀ #3 The number of significant variations in the speech of female second-grade speakers occurring as the age of the listener changes will not differ from the number of significant variations in the speech of male second graders.

H₀ #4 The number of significant variations in the speech of female middle-class second-grade speakers occurring as the age of the listener changes will not differ from the number of significant variations in the speech of female lower-class second-grade speakers.

H₀ #5 The number of significant variations in the speech of male middle-class second-grade speakers occurring as the age of the listener changes will not differ from the number of significant variations in the speech of male lower-class second-grade speakers.

H₀ #6 The number of significant variations in the speech of female middle-class second-grade speakers occurring as the age of the listener changes will not differ from the number of significant variations in the speech of male middle-class second-grade speakers.

- H₀ #7 The number of significant variations in the speech of female lower-class second-grade speakers occurring as the age of the listener changes will not differ from the number of significant variations in the speech of male middle-class second-grade speakers.
- H₀ #8 The number of significant variations in the speech of female middle-class second-grade speakers occurring as the age of the listener changes will not differ from the number of significant variations in the speech of male lower-class second-grade speakers.
- H₀ #9 The number of significant variations in the speech of male middle-class second-grade speakers occurring as the age of the listener changes will not differ from the number of significant variations in the speech of female lower-class second-grade speakers.

Importance of the Study

The listener characteristic of age and its influence upon the speaker should be of importance to educators. Changes in the structure of the elementary school have resulted in a tendency to group children of varying ages together for instructional purposes. The most recent of these trends is exemplified by the multi-age organizational pattern incorporating a team-teaching concept (Shuster, 1973). This approach to instruction is exemplified by Individually Guided Education, which, according to Chase (1977) is "one of the more widely adopted and better implemented of the educational innovations that took shape in the 1960's" (in Klausmeier, Rossmiller, and Saily, 1977, p. xi). Justification for a multi-age grouping pattern has stemmed from the belief that administrative and management concerns as well as social, emotional, and instructional factors will be enhanced by a redistribution of students throughout the school. Besides enhancing the administrative functioning of the school, such an arrangement is designed to provide for increases in the cognitive development of the student.

Among those cognitive beliefs is the contention that language learning is stimulated by variety of contacts. In fact, Moffett (1973) in his book titled "A Student Centered Language Arts Curriculum--1973 Impression" maintains that:

More learning takes place when students of different ability, achievement, socio-economic class, dialect, sex, and race are mixed together. An English classroom should be as richly varied a speech community as can be mustered (p. 5).

While Moffett does not state explicitly that differences among student age would contribute to language learning as do the factors described in the above quote, it is implicit in his appeal to educators that as many variations among individuals as possible be introduced into the classroom (Moffett, 1973, p. 6).

By grouping children of varying ages together, it is maintained that the child would be provided with the opportunity to verbally interact with a wider audience--the result being an increase in the child's language ability. It is only assumed, however, that the child speaker is capable of manipulating his speech to adapt it to the age of the listener. It is also only an assumption that a direct relationship exists between the variety of verbal contacts and the degree to which language facility is developed. The factors that contribute to increased verbal ability are largely undetermined. In spite of the uncertainty of the impact multi-age grouping has upon the child learner, the practice is consistently recommended by educational planners. It is not known, however (A) whether or not the second-grade child makes listener age appropriate adjustments, (B) what those adjustments might be if they do indeed occur, (C) whether or not males differ from females in their ability to make

listener adapted speech adjustments, and (D) if social class status is a factor that might be related to the ability to make listener adapted changes.

By answering these questions, information regarding the child's language ability will be obtained that has direct implications for the concept of multi-age grouping. In addition, information will be made available that will prove useful in mapping the child language acquisition process.

Review of Related Literature

This study was undertaken to determine if second-grade children speak differently to kindergarteners than they do to peers. In order to determine those speech adjustment variables that should be taken into account, a review of the related literature was conducted. Since it was recognized that a number of investigations into speech adjustments according to various listener characteristics have been conducted to date, an examination of those listener characteristics presently accounted for would provide the necessary foundation for this study.

Previous investigations into speech patterns have concerned themselves specifically with adjustments resulting from speaker sensitivity to:

- (A) Audience size and composition (Williams, 1942)
- (B) Emotional characteristics of listeners (Alvy, 1973)
- (C) Differing social class status between speaker and listener (Krauss, 1968)
- (D) Social and linguistic characteristics of listener responses (Fry, 1966; Weeks, 1971)

- (E) The chronological age of the listener involved (Snow, 1972; Shatz and Gelman, 1973)
- (F) Complexity of the task situation (Glucksburg, 1966; Krauss, 1969)
- (G) Role-playing capabilities of the child (Flavell, 1968; Dale and Kelly, 1972; Sachs and Devin, 1973)

It is apparent that the techniques utilized in these investigations to collect data have been varied, the characteristics of speech adjustments subject to analysis have likewise been quite different.

Each of these areas of investigation have described factors capable of partially accounting for speech adjustment. These studies are cited and discussed because each has contributed information supporting an investigation into speech adjustment according to listener age. These studies and their relationship to the problem questions are presented chronologically and are summarized in the following chart.

Because the research previously conducted with regard to speech adjustments according to listener characteristics has become of interest to educators, the review of the literature has also included an examination of current educational trends. The contention that speakers adjust their speech according to variations in the age of their listener has been frequently associated with the current practice of reorganizing the elementary school into multi-age grouped units incorporating a team teaching concept. The writing of Holzman, 1972; Shuster, 1973; and Klausmeier, 1974, 1977; have been selected to describe the extent to which such shifts in organizational patterns have occurred. In addition, the work of Moffett (1973) has been chosen to represent the belief that as many variations

among individuals as possible should be introduced into the classroom in order to stimulate language learning.

The comments of Holzman, Moffett, Shuster, and Klausmeier and their relationship to the problem questions are also included in the following chart. Each of these areas have been categorized according to their particular focus and are commented on more completely in the subsequent discussion.

 INSERT TABLE 1 ABOUT HERE

Procedures

The procedures utilized to conduct this investigation involved the following steps:

1. Making initial contacts with selected schools to assess willingness to participate
2. Identifying and selecting children to take part in the study
3. Obtaining parental approval for students' participation in the project
4. Constructing a series of tasks to which children could respond to verbally that would be suitable for use in the public schools with children of primary school age
5. Eliciting and recording the actual speech samples from the children
6. Transcribing the language so that the taped speech segments might be quantitatively analyzed
7. Verifying the accuracy of the transcriptions
8. Scoring the transcribed utterances on eight select variables
9. Applying tests of significance for statistical analysis of data

TABLE 1
RELATIONSHIP OF RELATED RESEARCH TO PROPOSED STUDY

AUTHOR	YEAR	FOCUS OF WORK	FINDINGS	RELATIONSHIP TO THIS STUDY
Piaget	1932	Speaker attention to audience	Before age 7 speaker fails to attend to audience	Suggests that about age 8 speaker begins to attend to audience. Related to H ₀ #1
Williams	1942	Speaker attention to audience	Children 3-5 to 3-10 did respond as audience size and composition varied	Suggests that speaker adjustments do occur according to audience characteristics in the early ages. Related to H ₀ #1
Glucksburg	1966	Affect of concept complexity on communication effectiveness	Novel concepts are more difficult to express than familiar. As age increases, communication effectiveness increases	Selection of task crucial. To avoid error in responses elicited, task stimulus must be suitable-familiar concepts not strictly novel. Related to H ₀ #1
Krauss	1968	Social class differences	Variations in communication effectiveness related to social class. Middle class+ Lower class-	Social class distinctions may also exist in the ability to make speech adjustments as listener age varies. Related to H ₀ #2,3,4,5

TABLE 1 (cont'd)

AUTHOR	YEAR	FOCUS OF WORK	FINDINGS	RELATIONSHIP TO THIS STUDY
Horner	1968	Speaker attention to audience	3 year olds varied use of attention-getting devices as age of listener changed	Suggests that pre-schoolers are capable of speech adjustments, Supportative of Williams and case for child's ability to make listener adaptive changes.
Flavell	1968	Effects of role-playing ability on speech adjustment	Preschoolers could role-play and adjust speech to assume listener role	Supportative of young child's ability to make speech adjustments, Related to H ₀ #1
Krauss	1969	Affects of concept complexity on communication effectiveness	Novel concepts more difficult to express than familiar. Age of speaker influenced ability to communicate	Crucial to task selection. Recommends familiar forms verses novel for communication effectiveness. Related to H ₀ #1
Weeks	1971	Effects of listener responses on speech adjustment	Use of registers by listeners when responding to speakers affects speech of speaker, Ss were pre-schoolers.	Listeners adaptive changes were found to occur at ages 3 to 5. Calls for additional investigation into speech adjustment with school age children.

TABLE 1 (cont'd)

AUTHOR	YEAR	FOCUS OF WORK	FINDINGS	RELATIONSHIP TO THIS STUDY
Snow	1972	Effects of listener's chronological age on speech of speaker	Adults found to adjust speech as age of child listeners varied	Supports need to examine if school age children are capable of making adjustments as listeners age varies
Dale & Kelly	1972	Effects of role-playing ability of speech adjustment	Preschoolers when role-playing adjust speech to suit the age of the role being imitated	Children at preschool level are capable of adjusting speech to represent role imitated. Supports contention that children are capable of making speech adjustments
Holzman	1972	Individually Guided Education and the Multi-Unit School IGE/MUSE	Demonstrated that during 1972 some 500 schools in 18 states had incorporated the IGE/MUSE program. 550 additional schools had subscribed to the concept for 1972-73 year	Supports statements that multi-age grouping is a practice being implemented on a nation wide basis

TABLE 1 (cont'd)

AUTHOR	YEAR	FOCUS OF WORK	FINDINGS	RELATIONSHIP TO THIS STUDY
Shatz & Gelman	1973	Effects of listener's chronological age on speech of speaker	4 year olds made speech adjustments as age of listener varied	Supports contention that child speakers respond to variations in age of listeners
Alvy	1973	Effects of emotional characteristics of listeners on speech adjustment	Female speakers made more adjustments than males. As age increased, the number of adjustments increased. Social class status affected the number of adjustments. Social class + then more adjustments occurred	Supports child's ability to respond to variations in listener's emotional state. Provides information on social class differences. Related to H ₀ #2,3,4,5
Moffett	1973	A student centered language arts curriculum	Impressions are that multi-age grouping practices are stimulants to language development	Supports the contention that multi-age grouping is assumed beneficial. Need is to determine if 7 year olds can respond to listeners of different ages

TABLE 1 (cont'd)

AUTHOR	YEAR	FOCUS OF STUDY	FINDINGS	RELATIONSHIP TO THIS STUDY
Shuster	1973	Elementary School organizational patterns	A variety of plans have been implemented in elementary school programs. The multi-unit concept is the most recent to be widely accepted	Supports the contention that multi-unit schools with multi-age grouped classrooms or units is a current educational practice
Sachs & Devin	1973	Effects of role-playing ability on speech adjustment	Preschoolers change and simplify speech when role-playing a baby	Supportative of young child's ability to make listener adaptive changes
Klausmeier	1974	Nationwide impact of ICE/MUSE	During 1974-1975, approximately 2,000 ICE schools in 37 states have been identified as operative	Updates statements that multi-age grouping is a practice being implemented on a nationwide basis and is still receiving wide spread attention

In this paper I will elaborate only on the selection of participants, the task requirements, the determination of socio-economic status, data collection techniques, the transcription and verification of samples obtained, and scoring procedures.

Selection of Subjects

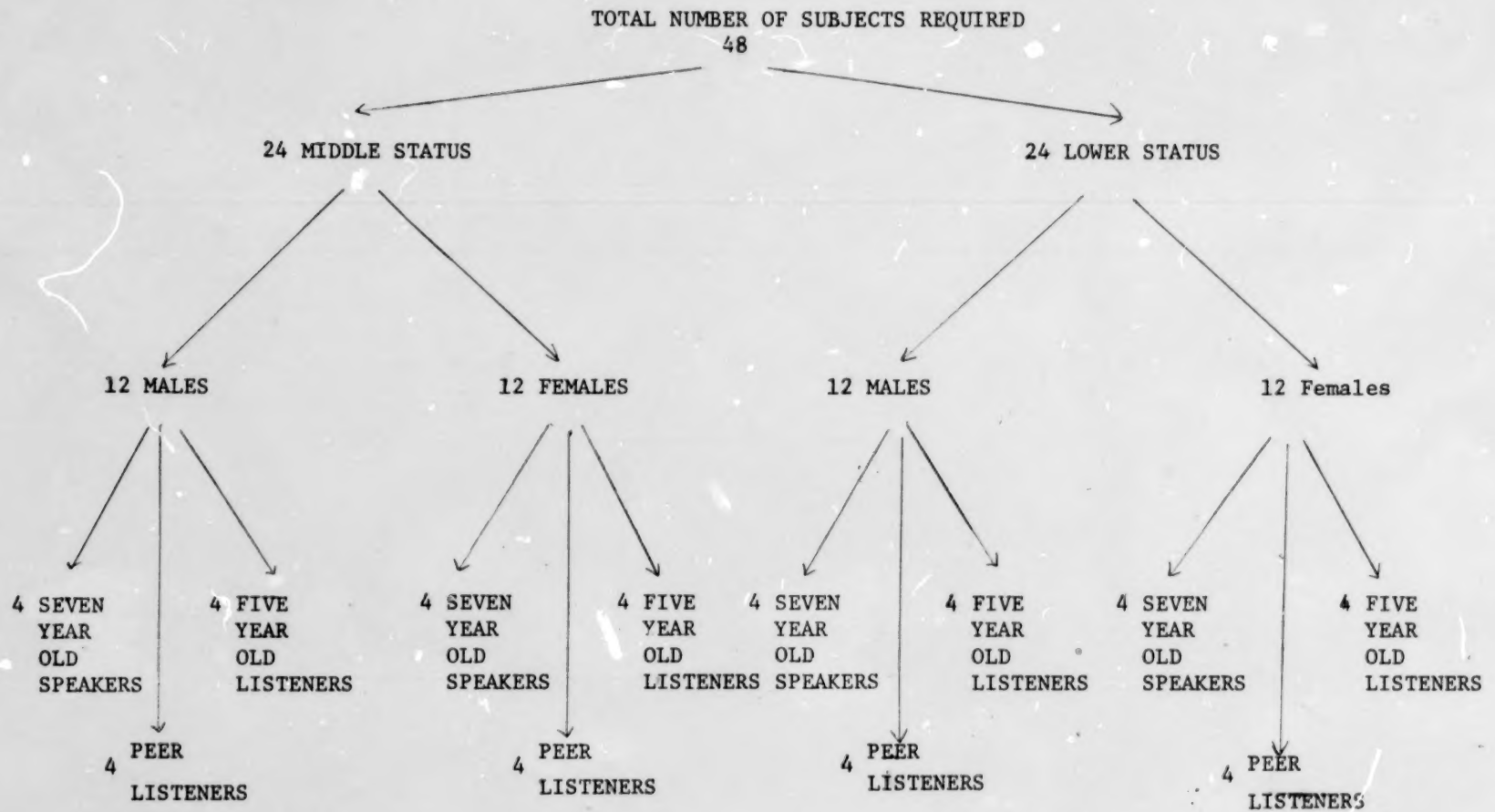
This investigation required the selection of 48 subjects for the data collecting sessions. By virtue of the project's research design, 24 students would be drawn from the lower socio-economic school population and 24 subjects would be obtained from the middle status school. Within each group of 24 subjects it was necessary to have 12 males and 12 females. Each group of 12 subjects was to consist of 4 second graders randomly assigned to a speaker role, 4 more second grade subjects randomly assigned to a listener role and 4 kindergarten students to serve as the young listener. The distribution of the required subject sample is represented in Figure #1.

INSERT FIGURE #1 ABOUT HERE

Having determined the number, sex, and age of the children to participate in the project, the next step was to set up a selection procedure. Since the subject selection procedure was identical for both schools, it is not necessary to report by school the procedure for choosing subjects.

(A) In each school, the experimenter was provided with class lists for the second grade classrooms and the kindergarten classrooms,

Figure #1 Distribution of Sample



both the morning and afternoon sessions. In the urban school, the class lists obtained were from all the second grade and kindergarten classrooms. At the suburban school, however, the principal approached the second grade and kindergarten classroom teachers individually to request their participation in the project. The class lists of only those teachers who voluntarily agreed to involve themselves with this investigation were provided for the experimenter's use.

(B) In both school situations, the class lists received from the individual teachers were combined to form a large subject eligibility pool. The process of combining the individual class lists into one master list consisted simply of arranging all the second grade children's names into alphabetical order. For the second grade eligibility pool it was necessary to form two separate master lists--one consisting of just females, the other comprised of solely males. With reference to the kindergarten students, it was necessary to arrange the names received into four distinct lists. In each school there were both morning and afternoon kindergarten sessions. In order to collect the required speech samples in the two days time allocated to this project, the data collecting sessions were planned to run the length of the entire school day. Since in each session it was necessary to have a kindergartener available to serve as the young listener, students had to be drawn from both the morning and afternoon sessions. As a result, the eligibility pool for the kindergarten subjects consisted of male and female lists for the morning session, and male and female lists for the afternoon sessions.

(C) The third step in the subject selection process involved the isolation of subjects from the eligibility pools that were created from the individual teachers' class lists. In order to select students for participation, the experimenter assigned to each name appearing on the eligibility pool list a random number table (Kerlinger, 1973, p. 714). These random numbers were assigned in a systematic fashion. The experimenter began with the first number in the first column on the first page of the random number table and continued down the columns until each name on each of the eligibility lists had been assigned a random number.

Having completed this assignment step, the experimenter reviewed each eligibility list and marked in red the lowest number occurring for that particular pool of names. The student's name to whom that number had been randomly assigned was selected for participation in the project. The next number closest in value to the lowest already identified was likewise marked. The name of the student to whom that number had been assigned became the second subject selected. This process continued for each eligibility pool until 86 children had been selected for inclusion in this study. Forty-eight students were assigned as project participants and 38 children were selected from the eligibility pool to serve as alternates.

(D) Once the initial selection process was completed, the names of the 86 children drawn from the eligibility pools were alphabetized and assigned new random numbers taken from the table used for the initial selections. This second alphabetizing and random number assignment was done for purposes of assigning the second grade subjects to either a speaker, listener, or alternate role in the

investigation. Once the new random numbers were assigned, the lowest number in any given sequence was clearly marked. The name to which that number had been assigned would, in the case of the second grade students, serve as a speaker. The next three closest numbers in the sequence identified those students who would also serve in the speaker position. The next four numbers marked those students who would be listeners. The last four numbers in the sequence identified those who would serve as alternates to fill vacancies due to absenteeism.

Since the kindergarteners selected for participation in this study were to serve in the listener position only, it was not necessary to reassign them in the fashion described above. For the kindergarteners, then, the first four names in the number sequence were automatically assigned to the listener position. Alternates were identified as those who occurred next in the random number sequence as assigned in the initial eligibility pools.

(E) With the selection of subjects completed, it was felt that the classroom teachers and administrative officials should be given the opportunity to review the final selection lists. The experimenter made available to the second grade teachers and to the kindergarten teachers the list of names that had been selected as project participants. Included also was a separate page indicating in what capacity the student was going to serve--either as a listener, speaker, or alternate. Teachers were requested to review the list and to indicate which, if any, of the students should not be included in this project because of severe emotional difficulties. In addition, since the classroom teachers also had available to them the pairings of students (who was going to speak to whom) they were

requested to indicate to the experimenter if any of the students appearing in a group were particularly hostile or overly friendly toward each other. In those few cases where conflicts or friendships were thought to be possible hazards with regard to the success of this project, internal shifting was done to construct a series of groupings that were not objectional to any of the parties involved.

Having received the approval of both the classroom teachers involved and the administrators assisting in this investigation, the subject selection process was completed.

Task Requirements

In order to obtain speech samples suitable for comparison, each speaker was introduced to the tasks described below. These tasks were selected based on results obtained from two pilot projects previously conducted in preparation for this study.

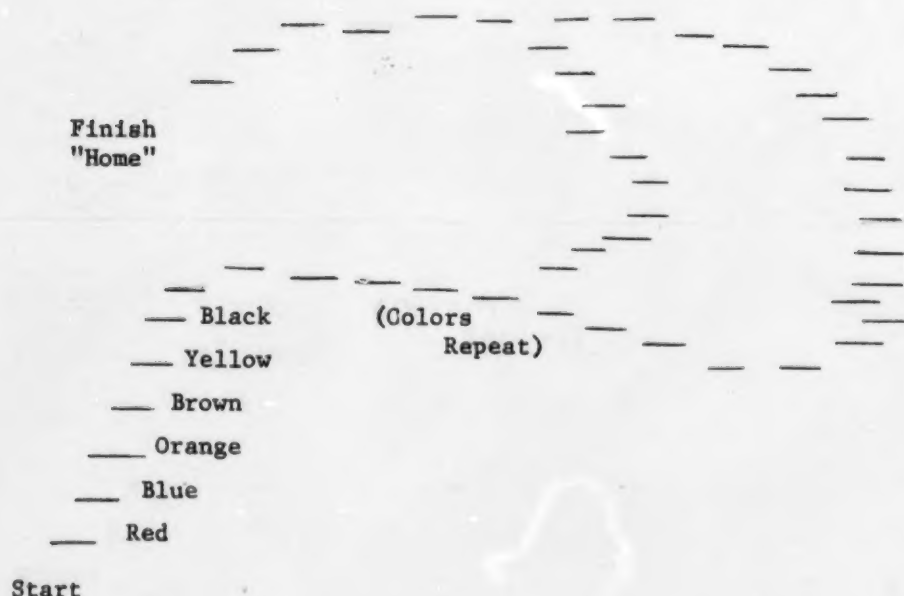
(Task #1)

A board game was especially adapted for this study based on those used by Flavell (1968). This board game consisted of the playing surface indicated in Figure #2. Dice colored to correspond to the board colors was used to determine moves.

In this task situation, the second grade speaker was introduced to the board game by the experimenter who explained that a game was going to be played. The experimenter provided no rules or explanations, but simply began to play the game by tossing the dice.

If on the first toss the die colors matched, the experimenter moved his marker to the corresponding color and then gave the dice to the child.

Figure 2.
Board Game Task



Board game adapted from commercially available Milton
Bradley Co. "Yogi Bear" Game, 1971.

If the colors did not match, the experimenter left his marker in the start position and continued to throw them for two more turns. If a match was not achieved by the third toss, the dice were passed to the child.

The child then acted in an appropriate manner. Only if there was a total lack of understanding concerning the game were instructions provided by the experimenter. An effort was made to simply play the game. To avoid modeling, there was no communication between the experimenter and the child speaker.

The dice were tossed and exchanged between players until it was obvious that the child understood how the game was to be played. At that point the game instruction was concluded.

The second grade speaker was then told that he was going to play the game with a peer; this time, however, he would have to explain to his partner how to play and could not demonstrate for him the procedure. The speaker could not toss the dice or manipulate the playing pieces for the listener. The speaker was told that the only action he could take was to move his own marker and to toss the dice on his own turn. The listener would do dice tossing as instructed by the speaker. The game was to be played as indicated until one marker reached the Home area.

(Task #2)

The second speech stimulus was a set of wooden blocks that were colored and marked in a variety of ways. These blocks were to be manipulated by the children so that two identical columns of blocks would be constructed.

This block construction was selected because, (a) it was found to be a task suitable for use with children in determining communication effectiveness by Glucksburg, Krauss, and Weisberg (1966), (b) is of a game nature, (c) can be adapted to varying ability levels of participants, (d) is flexible enough to be repeatable, (e) offers a variety of construction possibilities, (f) permits the speaker to have some decision in selecting items for communication and (g) it also requires active participation.

In this task situation, the second-grade speakers were introduced to the blocks by the experimenter who explained that another game was going to be played. This time, however, the blocks would be used. The child speakers were told to select five blocks and to stack them on a peg especially designed to receive the wooden blocks. The child speakers were told to turn the blocks so that either a picture or a number they liked faced toward them and was clearly visible.

Once the second-grade speakers had completed the column and had five pictures or numbers turned toward them, the experimenter showed the speakers another set of blocks and a peg that were identical to their own. The experimenter told the child speaker that the person they were going to play the game with would have that set of blocks and that peg. The speakers were told by the experimenter that they would have to tell their listeners which blocks to take to make a column identical to their own. The speakers were told to look at the first block they had put on their peg and to tell the listener all they could about it so that the listener could find the same block in their pile. Once the listener found the block, the speakers were instructed to tell the listeners to place the block on their pegs and to turn it so that the same picture or number faced forward. Once the first block was selected and placed properly on the column by the listener, the speaker was instructed to go to the second block and to provide the listener with the necessary clues. The process repeated itself until the listener had selected five blocks and placed them all on the peg.

For this task, the column of blocks made by the speaker was not visible to the listener. The speakers were told that they could refer to their models as often as necessary to select different clues to convey to the listener. The speakers could not expose their column to the listeners. The speakers were told that they could not pick up a block for the listener and place it on the column. They could not point or manipulate in any way the listener's blocks. All they could do was provide verbally clues derived from the markings on their own blocks.

The task was completed when the listener had selected five blocks based on the speaker's clues and placed them on the peg. When the listener completed the column, the screen which was used to conceal the speaker's column was removed. The two columns were then compared to see if they were identical or not.

In accordance with the session schedule, the speaker was requested to explain to each listener, one at a time, how to perform the board game activity and how to construct the matching column of blocks.

The listeners, both at the peer and five-year-old levels were not encouraged to communicate. They understood they were to follow only the speaker's directions and to do as he requested. Their activities were all performed in full view of the speaker who monitored the effectiveness of his communication by the listener's activities.

Each task session was terminated (a) when the board game was completed and (b) when at least two columns were constructed. Since

100 utterances per listener were required, the tasks were expanded upon as necessary to elicit an adequate speech sample.

A maximum of 30 minutes was allocated per session. Previous pilot studies demonstrated that sessions of this time duration were sufficient to obtain adequate speech samples. No single session was permitted to exceed the allocated time period.

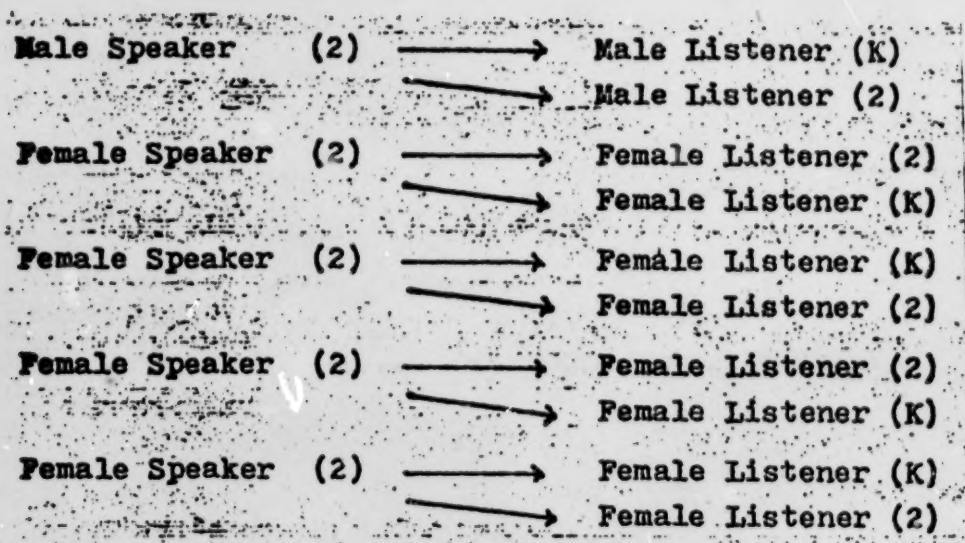
Data Collecting Sessions

In order to control for sex differences among subjects, the sessions were structured so that only males interacted with males, and only females interacted with females. In addition to controlling for sex differences among speakers and listeners, it was necessary to exercise a control over listener position--alternating peer and young listener in the initial listener position to counteract novelty affects.

Sixteen data collecting sessions were planned. They were constructed as follows:

Middle Status Sessions - Eight

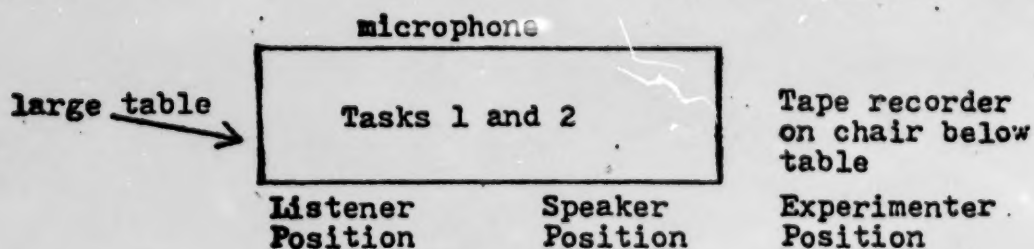
Key	(2) = Second Grade Subject
	(K) = Kindergarten Subject
Male Speaker	(2) → Male Listener (2)
	→ Male Listener (K)
Male Speaker	(2) → Male Listener (K)
	→ Male Listener (2)
Male Speaker	(2) → Male Listener (2)
	→ Male Listener (K)



Eight identical data collecting sessions were constructed for the lower status sample.

In each situation, the experimenter arranged the available furniture in an identical fashion. The room furniture arrangement is depicted in Figure 3.

Figure 3. Arrangement of Furniture



Since the experimenter's contacts with the selected schools over the past six semesters had made him familiar to the children and teachers within the school settings, the children were more than willing, except in one situation, to accompany the experimenter to the taping room. Since in each situation two children had to be called for, the experimenter made use of this informal time to

establish a rapport with the children, explain what was taking place, where they were going, and what they were going to do. Travel time to locate children was an excellent opportunity to acquaint the children with the project. In each situation when the taping session was completed, the speaker accompanied the experimenter in returning a listener to his or her classroom. This assured that none of the subjects involved were left unattended.

Each session was conducted as described earlier. The experimenter taped all conversations that occurred between the speaker and listeners. Each session was timed to stay within the time limits set for this project. The experimenter interceded in a given activity only if it appeared to be too prolonged, if there was a question regarding the activities, or if the children needed to be directed to the next task. In each situation, the children played the board game once and constructed the identical columns of blocks twice.

Transcription of Tapes

During the data collecting sessions, the experimenter recorded all the conversations that occurred between the subjects. A Wollensak portable reel-to-reel recorder was used during all data collecting sessions. Magnetic tape with 1 mil polyester backing and 1/4 inch wide was played at 3 3/4 IPS. Each seven inch reel provided the experimenter with 90 minutes recording time per side (three hours per tape). Two and one-half tapes were used for the duration of this experiment.

At the conclusion of the data collecting sessions the 7 1/2 hours of taped conversations had to be transcribed. In order to insure total familiarity with the data, all the initial transcription work was done by the experimenter. Tapes were played back and each spoken utterance was written down by hand. The handwritten copies were then typed by the experimenter to facilitate the data analysis process.

Verification of Transcripts

Before the actual data analysis could begin, it was necessary to verify the accuracy of the transcriptions. Reliability of transcription was obtained by having a graduate student currently enrolled in the Department of Speech and experienced in the speech analysis process review the corresponding tapes for accuracy. Any discrepancy in transcription was to be noted. The tape reviewer was instructed to play back the tapes of the child's speech and to follow the conversation as transcribed. Should any errors in transcription exist, the reviewer was instructed to note the discrepancy and to make what was felt to be the proper interpretation. The reviewer fulfilled the charge assigned and compared the entire set of transcripts to the tapes of the sessions.

Upon receipt of the corrected transcriptions, the experimenter examined the reviewer's notes and corrections. With the exception of minor spelling and typographical errors, the reviewer confirmed the accuracy of the experimenter's transcriptions.

Scoring the Utterances

Since the transcripts had been rendered accurate, it was possible to begin the process of scoring the 4036 utterances transcribed. The scoring procedure involved the following steps:

(A) Calculation of the mean length of utterance--for complexity variations using criteria supplied by Brown (1974) and Cazden (1972) and based on morphemes.

In order to arrive at the m.l.u. for each subject in each of the two situations, the experimenter found it necessary to determine the total number of utterances spoken over the two task situations to a given listener. That number was divided into the total number of morphemes found in that particular sequence of utterances. Each utterance, for each subject, to each listener had to be examined and scored according to the number of morphemes it possessed. A total of 15,923 morphemes were counted for the 4036 utterances obtained. With the total number of morphemes and the total number of utterances now known, the mean length of utterance for each subject could be calculated for comparison purposes.

(B) Calculation of the Developmental Sentence Score--for syntactic variations based on criteria outlined by Lee (1971).

This particular analysis required the experimenter to again review the utterances obtained from the speaker and to score each one according to the occurrence and use of the following eight items: indefinite pronouns, personal pronouns, primary verb, secondary verb, negative, conjunction, interrogative, and wh-question. Depending upon the sophistication of the form employed, the speaker would receive a score for use of the particular term. The values

assigned to these eight variables were summed for each sentence to yield a final sentence score. In order to determine the subject's syntactic maturity, the total sentence scores were summed and divided by the total number of sentences analyzed. Since the process of determining the D.S.S. was highly repetitive, the experimenter devised a scoring sheet to be used in each situation.

(C) Calculation of Type-token Ratios--described by Cazden (1972) for lexical diversity variations consisting of counts of:

- (1) Adjectives--quantitative and qualitative
- (2) Nouns--those words acting in the capacity of subjects or objects and meeting the traditional criteria of representing a person, place, or thing
- (3) Pronouns--all noun substitutes
- (4) Prepositions--those words functioning to relate a noun or noun equivalent to the rest of the utterance

In order to determine the type-token ratios (T.T.R.) for the above-mentioned items, it was necessary for the experimenter to review the transcripts for a third time. During this series of examinations, each sentence component was identified according to a grammatical part of speech classification. All adjectives, for example, occurring within a given sentence were listed on the prepared score sheet in the adjective column. All nouns, pronouns, and prepositions occurring were treated in a like manner.

Once these selected parts of speech had been listed in the appropriate columns, the experimenter studied each column in detail and listed on a separate sheet those words within a particular part of speech classification that were different. The total number of different adjectives, for example, occurring in a particular situation

was then divided by the total number of adjectives listed on the T.T.R. score sheet. This ratio of number of different types to the total number of tokens occurring resulted in the T.T.R. scores listed for each subject.

(D) Calculation of the percentage of total utterances taking the forms of:

- (1) Questions--either yes/no or wh- form
- (2) Attention-getting devices--vocalizations designed to maintain the listener's attention

The final scoring procedure that was applied to the data was the determination of the percentage of those utterances obtained that fell into the category of either a question or an attention-getting device. The experimenter reviewed the transcribed utterances, clearly identifying those speech segments that were obviously yes/no or wh- questions. During this review process, those utterances that were distinctly designed to maintain the listener's attention were also marked and counted. In both cases, the total number of questions and attention-getting devices occurring in the speech of a particular speaker was divided by the total number of utterances obtained from that individual. The percentage of questions and attention-getting devices, in decimal equivalent, was recorded for each of the subjects.

The end result of these four scoring procedures and their sub-components was a quantifying of all the speaker's utterances obtained in this investigation. The information available could be statistically analyzed to determine what, if any, differences existed between the second graders' speech to a peer and to a kindergartener.

Statistical Procedures Utilized

In order to test the null hypotheses, a three-factor mixed design repeated measures analysis of variance was selected. This design permitted the researcher to analyze each of the following dependent variables: (1) number of utterances, (2) mean length of utterances, (3) developmental sentence scores, (4) type-token ratios for adjectives, (5) type-token ratios for nouns, (6) type-token ratios for pronouns, (7) type-token ratios for prepositions, (8) use of questions, and (9) use of attention-getting devices. These measures were examined in terms of the following three independent variables: (1) the main effect--speech to a peer versus speech to kindergartener, (2) sex--males versus females, and (3) social class--middle-class status versus lower-class status. Considered also were the interactions of these three independent variables. Figure #4 depicts this three-factor repeated measures design.

Figure 4. Type III Repeated Measures Design

		Speech to a Peer	Speech to a Kindergartener
Male	Middle Class		
	Lower Class	Dependent variables 1 through 9 taken individually	
Female	Middle Class		
	Lower Class		

Because nine variables were examined in this investigation, it was necessary to generate a Type III ANOVA report table for each of the independent measures. Only by examining the differences between the means obtained for each cell in the research design could information regarding the null hypotheses stated be provided for each variable. In the subsequent discussion, the results obtained with regard to the hypotheses for each of the variables selected for analysis will be provided. Each null hypothesis was tested at the .05 level of significance.

This research design required the second-grade subjects to perform the tasks twice, once to a peer and then again to a kindergarten. The analysis procedure, therefore, took into account the fact that the data consisted of a series of repeated measures. The Type III repeated measures ANOVA was designed for use in situations such as this.

This particular analysis technique, however, does not control for the correlations that might exist between the variables selected for analysis. The occurrence of very high degrees of correlations between dependent measures could be partially responsible for any significant differences obtained. As a result, it was decided that a Pearson product-moment correlation coefficient matrix be generated for the nine variables to determine what, if any, inter-correlations existed among the items selected for analysis. The results of the tabulation would prove to be helpful in the interpretation of the Type III repeated measures ANOVA's run on the scored utterances. The correlations among variables are also reported in the following discussion where appropriate.

In those situations where significant mean differences were revealed by the three-way repeated measures analysis of variance, the Tukey Test for mean differences was applied to verify the results obtained.

The Tukey Test procedure required the experimenter to perform the following operations on those means revealed as possibly significantly different:

(1) Means were subtracted from each other to determine the actual differences existing between the means.

(2) All comparisons of $X_1 - X_2$ were divided by the $\sqrt{MS_w/N}$ where the MS_w is the mean square within factor levels and N is the number of observations in any one group.

(3) From the Table F contained in the Glass and Stanley (1970) text, the 100 (1- α) percentile point in the Studentized range distribution with degrees of freedom J and $J(N-1)$ was found. This percentile point indicated the minimally acceptable value the results from Step #2 must exceed in order to confirm significance.

(4) Any absolute difference between means divided by $\sqrt{MS_w/N}$ that exceeded the percentile point determined from Table F was rendered significant.

Through the use of the Tukey Test, the experimenter confirmed the significance of the mean differences obtained for a particular cell on a given variable.

Findings of the Study

The findings of the study with regard to the second-grade child's ability to adjust his speech as the age of the listener changes

from a peer to a kindergartener are reported in terms of the nine speech variables investigated: (1) the total number of utterances spoken; (2) the variations existing with regard to the mean length of utterance; (3) variations occurring in terms of syntactic maturity; fluctuations in lexical diversity as seen in relation to the use of (4) adjectives; (5) nouns; (6) pronouns; (7) prepositions; differences in the use of (8) questions, both the Yes/No variety and the Wh-form; and (9) attention-getting devices.

Listed below in chart form are the results obtained from this investigation:

<u>On the variable of</u>	<u>There were</u>
	N.D. = no differences
	≠ means not equal
	+ = higher score
	- = lower score
(1) Total # of utterances	N.D.
(2) Mean length of utterance	N.D.
(3) Syntax (U.S.S.)	M.C. ≠ L.C. Middle Class Subjects - N.D. Lower Class Subjects - + to Kindergarteners - to Peers
(4) Adjectives	M.C. ≠ L.C. Middle Class Subjects - N.D. Lower Class Subjects - + to Peers - to Kindergarteners
(5) Nouns	N.D.
(6) Pronouns	N.D.
(7) Prepositions	N.D.
(8) # of questions	N.D.
(9) # of attention-getting devices	N.D.

The statistical analysis of the data gathered in this study indicated that:

1. With respect to the total number of utterances spoken by second-graders, the speech of a second-grader to a peer was no different from his speech to a kindergartener.

2. The mean length of utterance of the second-grade speakers, both male and female, middle class and lower class did not vary as the listener changed from a peer to a kindergartener.

3. The syntax of the speech employed by the speakers was measured in terms of the Developmental Sentence Score. It was found that middle-class second-grade speakers differed from lower-class second-grade speakers with respect to syntax. It was discovered that male and female lower-class second-grade speakers used a greater variety of syntax when speaking to kindergarteners than to peers. This fact distinguished the lower-class speakers from the middle-class speakers. The syntax employed by male and female middle-class speakers remained relatively constant regardless of the age of their listeners.

REPEATED MEASURES ANALYSIS OF VARIANCE SOURCE TABLE
FOR VARIANCE #3--DEVELOPMENTAL SENTENCE SCORE

Source	df	SS	MS	F-Ratio
<u>Between Subjects</u>				
B (Sex)	1	0.58056	0.58056	0.5917
C (Social Class)	1	0.13940	0.13940	0.1421
BC	1	0.22021	0.22021	0.2244
Error	12	11.7751	0.98126	
<u>Within Subjects</u>				
A (Main Effect)	1	0.51318	0.51318	1.9457
AB	1	0.00048	0.00048	0.0019
AC	1	1.11865	1.11865	4.2413*
ABC	1	0.3208	0.32080	1.2163
Error	12	3.16503	0.26375	

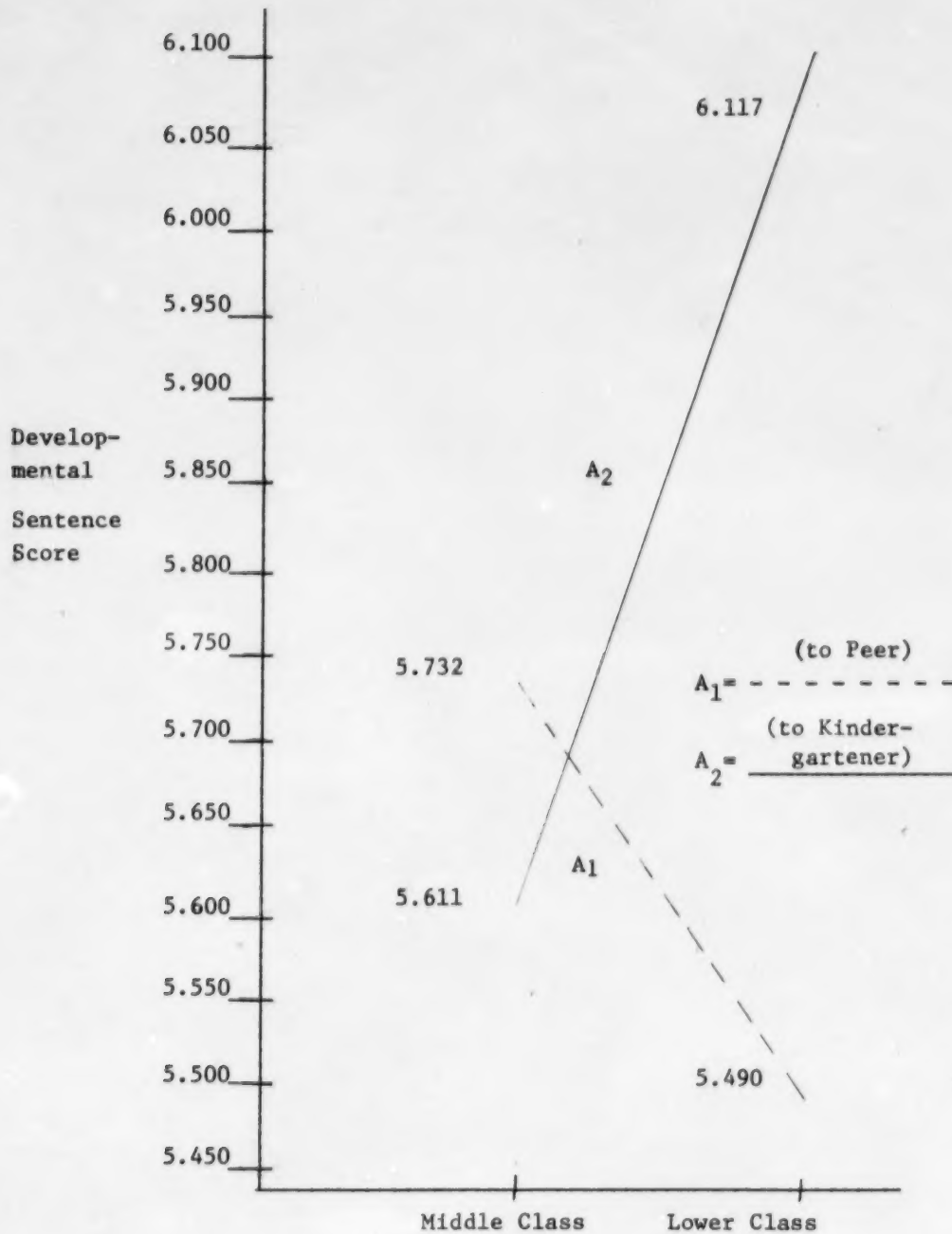
*p < .05

The source table confirms the fact that social class differences appear to exist in the speaker's ability to adjust his speech as the age of the listener changes from a peer to a kindergartener on the variable of syntactic maturity.

In order to clearly depict the significance of the AC interaction with the F-Ratio of 4.241, Figure 5 is provided.

From this graph it becomes clear that the middle-class speakers involved in this study used a more syntactically sophisticated style of speech in speaking to their peers than they did in conversing with the kindergarteners. The lower-class speakers, on the other hand, used their most syntactically mature speech, not when speaking to a peer, but when interacting with the kindergartener. While both

Figure 5. Plot of the Interaction
of the Main Effect and Social Class on Variable #3 -
Developmental Sentence Score



groups demonstrated differences in the syntactic maturity when the age of the listener changed, the fluctuations that occurred were in the opposite directions.

Because of the fact the Type III repeated measures analysis of variance revealed only the interaction of the main effect and social class and the fact that it was indeed significant, the Tukey Test was applied to the mean differences obtained to confirm the results.

The Tukey Test for the mean differences revealed that the differences between the middle-class speaker's use of syntax as the age of the listener changed was not a significant difference.

In the case of the lower-class speakers, the Tukey Test demonstrated clearly that the lower-class speaker's use of syntax did alter significantly when the age of the listener changed.

It can be concluded from the analyses performed that the lower-class second-grade speaker used a more syntactically mature speech when speaking to a kindergartener than to a peer.

Based on these results, it is apparent that the lower-class speakers possess a capability not evidenced with middle-class speakers. Hypothesis #2 must then be rejected. Significant differences do exist between middle-class and lower-class speakers in terms of the use of syntax with different age listeners. Hypotheses 1 and 3-9 cannot be rejected and must stand as true statements based upon these findings.

 INSERT TABLES 2 & 3 ABOUT HERE

TABLE 2
CORRELATION COEFFICIENTS BETWEEN SPEECH
VARIABLES GENERATED FOR SPEECH TO PEERS

	Mean length of utterance	Developmental Sentence Score	T.T.R. Adjectives	T.T.R. Nouns	T.T.R. Pronouns	T.T.R. Prepositions	Questions	Attention- Getting Devices
Total number of utterances	-.07	-.07	.67*	-.35	.23	-.25	.38	.51
Mean length of utterance		.64*	-.07	.51	-.46	-.03	.10	-.01
Developmental Sentence Score			-.04	.21	-.46	.42	.30	.24
T.T.R. Adjectives				-.44	-.09	-.07	.11	.04
T.T.R. Nouns					-.34	-.01	-.05	-.22
T.T.R. Pronouns						-.20	-.21	.32
T.T.R. Prepositions							-.20	.04
Questions								.43

*p < .01

TABLE 3
CORRELATION COEFFICIENTS BETWEEN SPEECH
VARIABLES GENERATED FOR SPEECH TO KINDERGARTENERS

	Mean length of utterance	Developmental Sentence Score	T.T.R. Adjectives	T.T.R. Nouns	T.T.R. Pronouns	T.T.R. Prepositions	Questions	Attention- Getting Devices
Total number of utterances	.37	.17	-.04	-.63	.08	-.06	.09	.62
Mean length of utterance		.28	-.34	-.20	-.28	-.37	.11	.22
Developmental Sentence Score			-.52	-.28	.08	-.07	.16	.40
T.T.R. Adjectives				.24	-.14	.47	.40	-.25
T.T.R. Nouns					.04	.04	-.22	-.28
T.T.R. Pronouns						.12	-.05	.16
T.T.R. Prepositions							.32	-.18
Questions								-.26

It was mentioned earlier that a Pearson product-moment correlation coefficient matrix had been generated to determine if any significant correlations existed between the variables. Table 2--Correlation Coefficients Between Speech Variables Generated for Speech to Peers and Table 3--Correlation Coefficients Between Speech Variables Generated for Speech to Kindergarteners report the correlation coefficients obtained in matrix form.

Since it was found that variable #3 was a significant factor in this investigation, it was felt that mention should be made of any variables that appeared to be highly correlated with it.

As Table 2 indicates, the mean length of utterance to a peer correlated with the Developmental Sentence Score found for conversations to peers .64. This correlation coefficient is significant at the .01 level (Popham, 1973, p. 382]. Approximately 36 percent of the variance, therefore, can be accounted for by the relationship found to exist between M.S.U. and D.S.S. In the case of conversations to kindergarteners, Table 10 indicates that the mean length of utterance and the D.S.S. were correlated .28. This correlation, however, does not achieve significance.

It is not surprising to find a high positive correlation between the mean length of utterance based on morpheme count and developmental sentence scores. The Developmental Sentence Score relies heavily upon the values assigned to the child's use of particular morphemes. The use of plurals, verb endings, contractions, etc., all constitute varying degrees of syntactic maturity depending upon their correct usage and frequency of occurrence. As a result, by virtue of the fact that both measures make use of a similar

scale--morphemes--to a greater and lesser extent, one would expect a positive correlation to exist between these two measures.

The results obtained from the creation of the correlation matrix as applied to this variable are consistent with the findings and in no way contradict the information concerning the children's use of syntax.

4. Lexical diversity as measured by the frequency of occurrence of different adjective forms indicated that middle-class second-grade speakers again differed from lower-class second-grade speakers. The lower-class second-grade speakers involved in this project tended to make use of significantly more adjectives in their conversations with peers than with kindergarteners. Middle-class speakers were found not to vary to any great extent the degree to which adjectives were employed.

REPEATED MEASURES ANALYSIS OF VARIANCE SOURCE TABLE
FOR VARIABLE #4--TYPE-TOKEN RATIO OF ADJECTIVES

Source				
<u>Between Subjects</u>				
B (Sex)	1	0.00383	0.00383	0.2953
C (Social Class)	1	0.00633	0.00633	0.4877
BC	1	0.00943	0.00943	0.7264
Error	12	0.15594	0.01299	
<u>Within Subjects</u>				
A (Main Effect)	1	0.03446	0.03446	4.1484
AB	1	0.00631	0.00631	0.7601
AC	1	0.04131	0.04131	4.9733*
ABC	1	0.00197	0.00197	0.2373
Error	12	0.09969	0.09969	

*p < .05

The source table reveals that within this measure a significant interaction of independent variables has again occurred. The F-ratio of 4.0733 for the AC interaction exceeds the required value of 4.17 for significance at the .05 level. This interaction also, as with variable #3 involves the main effect and social class status. Figure 6 is provided for ease in comprehending the relationship existing between these two factors.

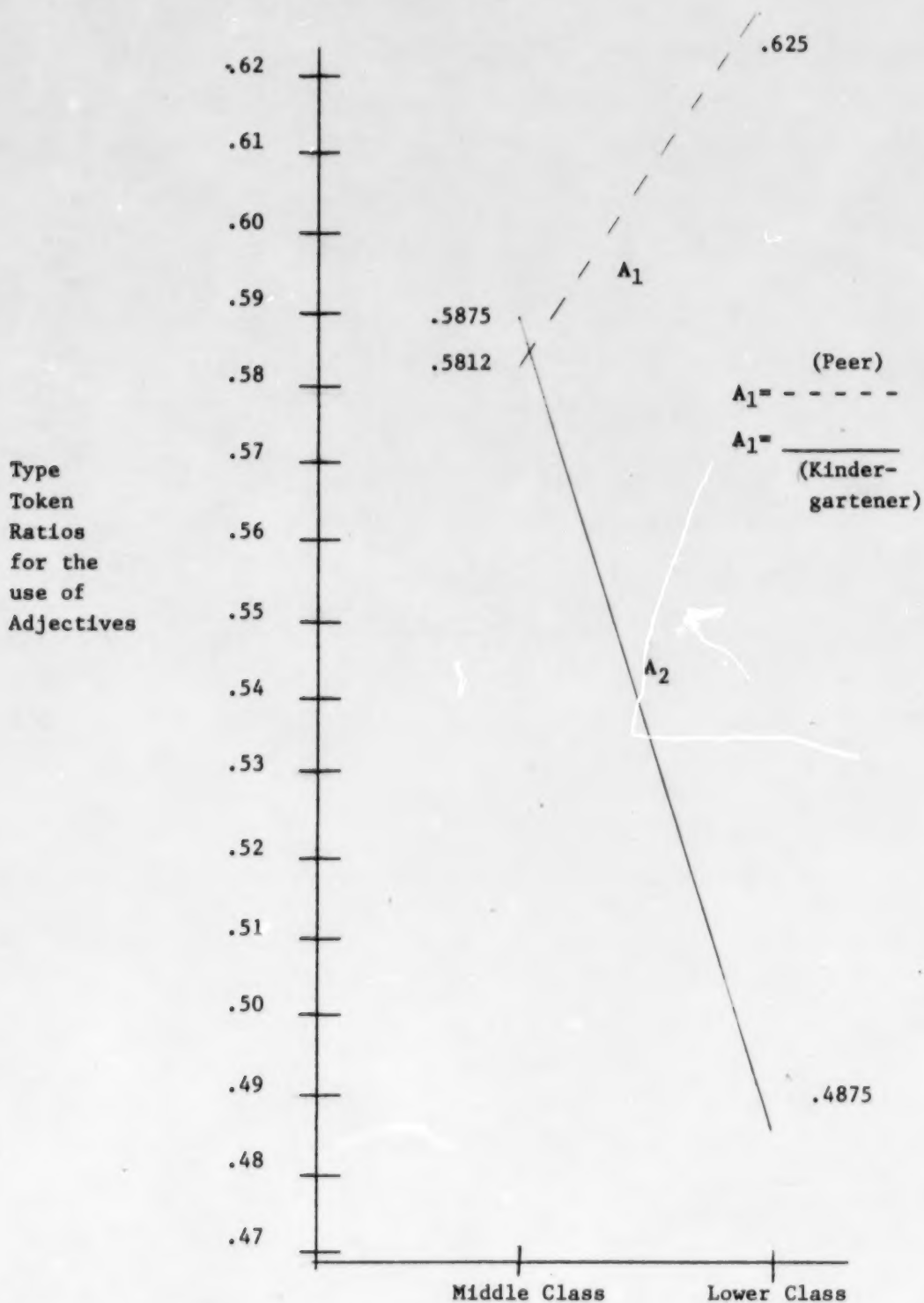
In studying this plot, it becomes apparent that middle-class speakers differed from the lower-class subjects in their use of adjectives during the data collecting sessions. It has been noted that middle-class speakers made use of a greater variety of adjectives in speaking to a kindergartener than they did to a peer. The middle-class speaker appeared to be somewhat more descriptive in his dealings with the young listener than with a peer.

The lower-class speaker, however, showed a remarkable difference in the degree to which adjectives were employed depending upon the age of the listener. As the plot indicated, the lower-class speaker used a greater number of different adjectives in his conversations with a peer than with a kindergartener. It appears that the lower-class speaker was decidedly more descriptive in his dealings with listeners his own age than with the kindergartener.

Because the Type III repeated measures analysis of variance reported a significant F-ratio for the interaction of social class and the main effect, $H_0\#2$ must be rejected. The remaining hypotheses 1 and 3-9, however, must stand as true statements.

While the Type III repeated measures ANOVA has revealed a significant interaction, here too, as in the case of variable #3,

Figure 6. Plot of the Interaction of the
Main Effect and Social Class on Variable #4



the Tukey Test of mean differences was applied to confirm the findings. Depending upon the results of the Tukey Test, concluding statements regarding the speakers' performance on this variable can be arrived at.

In the case of the mean differences reported for the middle-class speakers on this variable, the Tukey Test revealed that they were not significant enough to warrant a conclusion that middle-class speakers varied in their use of adjectives across the two listeners.

With the lower-class speakers, however, the Tukey Test revealed a significant difference between means. As a result, it can be confidently stated that the lower class speakers did indeed use a greater variety of adjectives in speaking to a peer than to a kindergartener.

An examination of the Pearson product-moment correlation matrix revealed that in the case of those utterances spoken to peers the T.T.R. for adjectives correlated with the total number of utterances spoken at the .67 level (Table 2). This correlation is significant at the .01 level. To the kindergarteners, a correlation of $-.26$ was discovered (Table 3). Although this correlation does not achieve significance, it is indeed an interesting finding.

These findings are completely consistent with those described above. In conversations to the peers, the length of the utterance was directly related to the degree to which adjectives were employed. The large means obtained in both cases attest to this fact. With the kindergarteners, however, an inversely proportional relationship appears to exist. As the length of utterance increased, the degree

to which adjectives were used decreased. Since it was noted earlier that the lower-class speakers tended to use a higher level of syntactic maturity in conversations with kindergarteners than with peers, it would lead one to suspect that in the case of the lower-class speakers, their speech to the young listener was decidedly less descriptive and quite a bit more concise and accurate than speech to peers. The findings with respect to variable #4 are by no means unexplainable and do, in fact, fit into the pattern the results are shaping. It should be interesting to note whether or not the remaining lexical categories behave in a similar fashion.

5. The remaining measures of lexical diversity, those ratios obtained for the use of nouns, pronouns, and prepositions, all resulted in findings of no significant differences among speakers.

6. With respect to the subject's use of questions during the task situations, it was found that no significant differences existed between the speech of second graders to peers and to kindergarteners.

7. The use of attention-getting devices was found to be similar across listener age. There were no differences found between the speech of a second grader to a peer and to a kindergartener on this variable.

Implications

These findings indicate that only second-grade lower-class children make adjustments in their speech as the age of their listener changes from a peer to a kindergartener. While it was

felt that school-age children in general would demonstrate a linguistic adaptability to the age of the listener, the results of this investigation do not support that assumption. Only two of the nine variables examined reported differences between the speech of a second grader to a peer and to a kindergartener.

It is implied by this investigation that:

1. Lower-class second-grade speakers tend to use more syntactically sophisticated speech in their conversations with kindergarteners than with peers.

2. Lower-class second-grade speakers tend to use a greater number of adjectives in their speech to peers than they do to kindergarteners.

At the present moment, the assumption that middle-class second-grade children adjust their speech as the age of their listener changes cannot be supported by these research findings. The results of this investigation appear to indicate that middle-class speakers in particular make little or no speech adjustments at all as the age of the listener changes. The middle-class speaker converses with the kindergartener just as he/she does with a peer and vice versa. If the speaker is aware of the fact that different demands are being placed upon him/her by the young listener, no attempt at all is being made to adapt speech styles to those listener requirements. The middle-class child, then, when placed in an educational setting that forces interaction with multi-age listeners appears to treat the younger members of that group linguistically in the same fashion as he does his peers.

The limited findings of this investigation suggest, however, that a somewhat contrasting situation appears to exist with respect to the lower-class speaker. Since it was found that the lower-class second-grade speaker made significant speech adjustments in the areas of syntax and use of adjectives when the listener changed from a peer to a kindergartener, one might be led to the conclusion that the multi-age group classroom is a somewhat more appropriate organizational pattern for the lower-class child than for the middle-class student--linguistically speaking.

The results of this investigation imply that the lower-class second-grader is sensitive to the needs of his/her listener. For reasons yet undetermined, it appears that the lower-class student responds to the kindergartener differently than to a peer. The young listener is provided with syntactically correct utterances and the comments made to the child are decidedly less descriptive than those made to a peer. Perhaps one might state that when conversing with the young child the second-grade lower-class speaker was directive, concise, and made a conscious effort to be clearly understood--thus the emphasis on syntax and lack of descriptors.

As a result, the classroom organizational pattern that places the lower-class second-grade child into contact with peers and with kindergarteners provides the second-grade child with the opportunity to exercise the capacity to adjust his speech according to variations in the age of the listener. The opportunity to constantly interact with various age listeners may indeed prove beneficial to the child's language development since these findings have indicated that speech adjustments do indeed occur with the lower-class

second-grade speaker. Whether or not the kindergartener's association with the second grader would be beneficial for the young child remains to be determined. It is quite probable, however, that given the second-grade child's tendency to adapt to the young listener, such contacts can only be to the young child's benefit. The multi-age grouped classroom then appears to be, from a linguistic point of view, a most appropriate classroom organizational pattern for lower-class children.

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